

REMARKS

This communication is in response to the outstanding Office Action dated December 31, 2003. Claims 21-26 and 28-46 were rejected under 35 USC § 103 using McFarland in view of Rose. The Office Action indicates that claim 27 is objected to and would be allowable if written in independent form. Claims 47-61 have been added.

Request for Reconsideration

Applicant requests a reconsideration of the obviousness rejection of claims 21-26 and 28-46.

Amendments

Claims 21-28, 32-40 and 44-46 are amended to remedy formal errors in the claims, such as formatting and spacing. The only substantive change to the claims is broadening by replacing means-for-function language with apparatus language. The amendments are not to be construed as an admission by Applicant of the correctness of the rejection.

Obviousness Rejection of Claims 21-46

The Patent Office has the burden under 35 U.S.C. § 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). To establish a *prima facie* case of obviousness, the Patent Office must show that some objective teaching in the prior art or some knowledge generally available to one of ordinary skill in the art would lead an individual to combine the relevant teaching of the references. *Id.*

The *Fine* court stated that:

Obviousness is tested by "what the combined teaching of the references would have suggested to those of ordinary skill in the art." *In re Keller*, 642 F.2d 413, 425, 208 USPQ 871, 878 (CCPA

1981)). But it "cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching or suggestion supporting the combination." *ACS Hosp. Sys.*, 732 F.2d at 1577, 221 USPQ at 933. And "teachings of references can be combined *only* if there is some suggestion or incentive to do so." *Id.* (emphasis in original).

The M.P.E.P. adopts this line of reasoning, stating that

In order for the Patent Office to establish a *prima facie* case of obviousness, three base criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. M.P.E.P. § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir. 1991)).

An invention can be obvious even though the suggestion to combine prior art teachings is not found in a specific reference. *In re Oetiker*, 24 USPQ2d 1443 (Fed. Cir. 1992). At the same time, however, although it is not necessary that the cited references or prior art specifically suggest making the combination, there must be some teaching somewhere which provides the suggestion or motivation to combine prior art teachings and applies that combination to solve the same or similar problem which the claimed invention addresses. One of ordinary skill in the art will be presumed to know of any such teaching. (See, e.g., *In re Nilssen*, 851 F.2d 1401, 1403, 7 USPQ2d 1500, 1502 (Fed. Cir. 1988) and *In re Wood*, 599 F.2d 1032, 1037, 202 USPQ 171, 174 (CCPA 1979)).

Applicant respectfully submits that the Office Action did not make out a *prima facie* case of obviousness for the following reasons:

- (1) even if combined, the cited references fail to teach or suggest all of the elements of Applicant's claimed invention;
- (2) The cited references teach away from Applicant's claimed invention;
- (3) There is no suggestion to combine the cited references because a suggestion to combine must come from the prior art and not from Applicant's

specification or impermissible hindsight; and

(4) The claimed invention has not been considered as a whole.

**(1) cited references fail to teach or suggest all of the elements of
Applicant's claimed invention**

The Office Action states that "Rose discloses that the use of a tuning adjustment device comprising a means for bringing at least string proper playing pitch from an untensioned conditioned at least one pitch tuning quickly is well known in the art (column 6, lines 6-20)."

Rose discloses a tremolo that is brought to a normal position by tension created by tuning pegs (17) on strings attached to one side of the fulcrum tremolo and by tension of biasing springs (30) on another side of the fulcrum tremolo (col. 3 line 41-51). The fulcrum tremolo is not brought into normal position by the fulcrum tremolo itself, but rather by outside forces created by the pegs and springs. Further, Rose discloses a fine tune for fulcrum tremolo where the strings have been first tuned by the tuning keys, and then clamped in a condition where the tuning keys no longer function, (col. 32-52)

Rose discloses making *subtle* changes in the tension of the strings created by the tuning pegs when the strings are clamped. As such, the tuning that Rose discloses is limited to fine tuning or a manner "as to change the tension of the string" (col. 2 line 17). Thus, fine tuners do not have ability to raise tension of strings from an untensioned condition to a pitched condition, especially so when the strings are clamped as disclosed.

Claims 21-44 require "an untensioned condition." However, McFarland and in particular, Rose do not disclose "an untensioned condition" because each require a string to be tensioned at playing pitch by a separate device "tuning keys or the like" (col. 1 lines 20-23) such as tuning pegs in order to work at all before the clamped condition is achieved on the Rose tremolo. This is a serious and

distinct deficiency in the disclosure of McFarland and Rose. The reference must teach or suggest all the claim elements. M.P.E.P. § 2142 (citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed.Cir. 1991)). Therefore, on this point alone claims 21-44 are allowable. Thus, the application is in a state of allowance.

(2) The cited references teach away from Applicant's claimed invention

Not only does McFarland fail to disclose all the elements of claims 21-44, but McFarland describes a "tool or device" that is temporarily attached to the Rose fulcrum tremolo for allowing the adjustment of the harmonic tuning of an individual string while clamped and under tension which would otherwise be impossible. See column 2, lines 20-44, of US Patent 4,611,523. The references do not teach or suggest a stringed musical instrument having an adjustment device for bringing a string to playing pitch, as recited in claim 21 because the disclosed tool of McFarland cannot be modified to be integral to the string musical instrument.

A factor cutting against a finding of motivation to combine or modify the prior art is when the prior art teaches away from the claimed combination. A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path the Applicant took. *In re Gurley*, 27 F.3d 551, 31 USPQ 2d 1130, 1131 (Fed. Cir. 1994); *United States v. Adams*, 383 U.S. 39, 52, 148 USPQ 479, 484 (1966); *In re Sponnoble*, 405 F.2d 578, 587, 160 USPQ 237, 244 (C.C.P.A. 1969); *In re Caldwell*, 319 F.2d 254, 256, 138 USPQ 243, 245 (C.C.P.A. 1963).

McFarland describes a device or tool that is temporarily attached to the Rose fulcrum tremolo for allowing the adjustment of the harmonic tuning of an individual string while clamped and under tension which would otherwise be impossible. Rose describes a fine tuning apparatus that functions as a bridge.

Where subtle changes to the tension of each individual string can be made while clamped in such a prerequisite condition there is no possibility of tensioning string from an untensioned condition. The references teach away from the claimed combination because the device or tool is not integral to the stringed musical instrument and performs no other function than for setting the intonation of the individual strings.

(3) There is no suggestion to combine the cited references

The Rose patent provides no suggestion or motivation for achieving pitch tuning a string from an untensioned condition from a mechanism that both supports and provides harmonic tuning at subtle pitch changes for the musical instrument when the string are clamped. The McFarland patent provides no suggestion or motivation and in point of fact teaches away from using a mechanism for providing pitch tuning a string from an untensioned condition of a musical instrument by only teaching a separate and distinct tool for harmonic tuning of the Rose fulcrum tremolo where the strings are clamped and thus preventing such a possibility.

(4) The claimed invention has not been considered as a whole

In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983); *Schenck v. Nortron Corp.*, 713 F.2d 782, 218 USPQ 698 (Fed. Cir. 1983); *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1143, 227 USPQ 543, 551 (Fed. Cir. 1985); MPEP § 2141.02. The examiner has not provided a basis of how the disclosure of McFarland can be modified to teach tensioning the string to

playing pitch from an untensioned condition. Applicant's claim recites a mechanism for tensioning a string to playing pitch from an untensioned condition for a stringed musical instrument so as to achieve a playing condition for the instrument. Mcfarland is not a permanent part of a musical instrument. Rose does not provide a mechanism for achieving playability by tensioning a string to playing pitch from an untensioned condition. Neither references provide a teaching for combination to tension a string to playing pitch from an untensioned condition for a stringed musical instrument.

Therefore, Applicant submits that the rejection of McFarland in view of Rose is not supported by any teaching in the art of record. The examiner has failed to meet the *prima facie* burden of obviousness by failing to take the claims as a whole, considering the destruction of the references if combined, and failing to give interpret the element of applicant's claim of adjustment device comprising a first portion for bringing said at least one string to playing pitch.

New Claims 47-61

New claims 47-50, 52-53, and 57-58 require an "untensioned condition." As discussed above, neither Rose nor McFarland disclose an "untensioned condition" because Rose discloses a fulcrum tremolo with a fine tuner that makes *subtle* changes in the tension of the strings. Accordingly, Rose's fine tuners do not have the ability to raise the tension of strings from an untensioned condition to a pitched condition. Thus an untensioned condition is beyond the scope of the Rose patent. Therefore, there is no disclosure of at least one aspect of claims 47-50, 52, and 57-58 which puts these claims in a state of allowance.

Claim 51 requires "bridge-tailpiece comprising at least one macro-tuner." As disclosed immediately above, Rose discloses a fine tuner that makes *subtle* changes in the tension of the strings. But the fine tuner is outside the scope of a macro-tuner. Thus Rose does not disclose claim 51.

Claims 53, 55-56 and 59-61 require "a bearing." Rose discloses a position screw 26 that contacts a knife edge section 21. McFarland discloses nothing of the sort. Therefore, claims 53, 55-56 and 59-61 are novel and are in a state of allowance.

New claim 54 depends on allowable claim 44, and is thus allowable too.
Claims 21-61 are in a state of allowance. Applicant respectfully requests a
Notice of Allowance for the application.

Respectfully Submitted,

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